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USMC Command Marine Corps Univ 2076 South Street Quantico, VA 2213	versity			N.	NUMBER /A
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15. SUBJECT TERMS					
Seabasing, Antiac	cess Area Denial, ((A2/AD), Falkland W	ar, Amphibious Ope	rations	
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON Marine Corps University/Command a
a. REPORT Unclass	b. ABSTRACT Unclass	c. THIS PAGE Unclass	UU	36	19b. TELEPHONE NUMBER (include area code) (703) 784-3330 (Admin Office)
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United States Marine Corps Command and Staff College Marine Corps University 2076 South Street Marine Corps Combat Development Command Quantico, Virginia 22134-5068

MASTER OF MILITARY STUDIES

OPERATION CORPORATE: PARALLELS OF THE JOINT OPERATIONAL ACCESS CONCEPT

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MILITARY STUDIES

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Executive Summary

Title: Operation Corporate: Parallels of the Joint Operational Access Concept

Author: Major Richard J. Stinnett Jr., United States Marine Corps

Thesis: An examination of the lessons learned from the Falklands War supplies future commanders with valuable insight for utilizing the Joint Operational Access Concept precepts in future amphibious operations.

Discussion: Many books, periodicals, and papers have been written about the Falklands War. Most of these cover a broad overview of the air, naval, and ground campaigns, or are very specific in regard to their subject. This research will study the British applications of the Joint Operational Access Concept and its precepts: the exploitation of advantages to disrupt or destroy enemy anti-access/area-denial, and establishment of a variety of basing options. These precepts are both part of the Joint Operational Access Concept central idea of cross-domain synergy. It refers to the ability to leverage capabilities across the five domains in order to enhance operational advantages, to maximize freedom of action across the operational area, and to gain access to the littoral regions of the world.

Conclusion: Operation Corporate is the ideal case study for US military planners working on future amphibious operations. The United States will face a variety of issues and challenges as it refocuses its outlook on the 'Pivot to the Pacific', offering its Marine Corps an opportunity to renew its core competency of amphibious operations. The advancing military capabilities of China, North Korea, and Iran, the emergence of large terrorist and criminal organizations, and dwindling natural resources should cause the United States to carefully consider its future operations. The Joint Operational Access Concept is not an unprecedented concept, as we learn from a study of the Falklands War. An examination of the lessons learned from the Falklands War supplies commanders with valuable insight for utilizing the JOAC in future amphibious operations.

DISCLAIMER

THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINE CORPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

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Preface

The research for this Master's thesis began out of a curiosity of the current challenges associated with amphibious operations. During the last decade as a Marine Corps artilleryman, I have executed duties associated with this profession as part of combat deployments to Iraq and Afghanistan, a Unit Deployment Program, and a Marine Expeditionary Unit. Like many artilleryman, I served in a variety of missions that seldom had anything to do with amphibious operations. However, while serving as a small boat navigator during the Marine Expeditionary Unit deployment, I became interested in historical amphibious operations. A recognition that the Marine Corps would soon return to its amphibious and expeditionary roots served as the movement for taking on this research.

INTRODUCTION

The conflict between Great Britain and Argentina during the spring of 1982 over the disputed Falkland, South Georgia, and Sandwich islands, is a modern day example of a joint amphibious force achieving operational access in a defended environment. The dispute between the two nations dates back to the 1830s and both nations used military and political means to gain advantage. In April 1982, the Argentinean government invaded both the Falkland and South Georgia Islands after protracted disagreements over the sovereignty of these islands. In response, Great Britain ultimately sent a large amphibious task force to the Falkland Islands in order to repatriate the archipelago into commonwealth control. The world at large called the ensuing war, the Falklands War, while the operational plan was called Operation Corporate.

Many books, periodicals, and papers have been written about the Falklands War. Most of these cover a broad overview of the air, naval, and ground campaign, or are very specific in regard to their subject. This research will study the British applications of the Joint Operational Access Concept (JOAC) and its precepts: the exploitation of advantages to disrupt or destroy enemy anti-access/area-denial (A2/AD), and establishment of a variety of basing options. These precepts are both part of the JOAC central idea of cross-domain synergy. It refers to the ability to leverage capabilities across the five domains in order to enhance operational advantages, and to maximize freedom of action across the operational area.

The JOAC describes the concept of Air-Sea Battle (ASB) as a means of defeating an adversary employing sophisticated A2/AD defenses. ASB identifies the actions needed to defeat these defenses, and the materials and manpower required in executing an operational plan aimed at defeating an A2/AD threat. ASB is viewed as both an evolution of traditional US power projection and a key supporting component of US national security strategy for the twenty-first

century.¹ However, it is important to note that while Air-Sea Battle did not exist during the Falklands War, British forces were able to counter a sophisticated Argentinean A2/AD threat with integrated air and naval forces. Very few operations are successful at gaining access in disputed territory without first addressing pre-conditions needed for combat operations. This requires forward bases to provide critical logistics nodes and staging areas from which to support the deployment of forces and supplies. These include permanent overseas installations, smaller more numerous bases for increased protection against enemy fires, temporary bases in austere locations, and seabasing.² However, establishing supporting positions in contested areas requires extensive preparations to the operational area and enemy defense in advance, to facilitate national strategic objectives. In gaining access to the Falklands, Great Britain used permanent, temporary, and sea-based basing options.

Operation Corporate is arguably the only modern example of a contested amphibious assault, and is the ideal case study of forcible entry operations with the purpose of projecting land forces ashore in the face of armed opposition. Any future operation will require access to contested areas as potential enemy A2/AD capabilities grow. The Joint Operational Access Concept purpose describes how a joint force will gain access to areas in a world with increasingly effective enemy strategies. As mentioned in the Chairman, Joint Chiefs of Staff, General Martin E. Dempsey's foreword in the JOAC, three growing trends will hinder future operations. These trends include both state and non-state actors acquiring more sophisticated weapons and applying A2/AD strategies, the changing US overseas defensive posture, and space and cyber-space becoming contested domains. Great Britain's involvement in the Falklands War is especially relevant in today's environment as they faced similar trends in 1982. During this time the British were downsizing their military expenditures and concentrated their military

power in Europe to counter the Soviet threat. They were not expecting to conduct operations against a state actor threatening their territories with sophisticated weapon systems. In the end, the British were able to meet a strategic objective by gaining and maintaining access in the face of armed opposition with an integrated joint force.

CONTEXT AND BACKGROUND

STATE CLAIMS

The threat to British rule of the Falkland Islands occurred after the end of World War II when the United Nations passed resolutions denouncing colonization. "Recognizing that the peoples of the world ardently desire the end of colonialism in all its manifestations" was announced in a 1960 meeting of the United Nations General Assembly and subsequently passed as UN Resolution 1514.⁴ This resolution further declared that "peoples have the right to selfdetermination; by virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development." Argentina had little legal ground to argue for the return of the Falklands during the preceding 100 years. However, Resolution 1514 led to the establishment in 1961 of a Special Committee, or 'committee of 24', and it was exclusively devoted to the issue of decolonization.⁶ Although several claims and protests had been lodged during previous centuries, Argentina was able to use the United Nations as a stepping stone to recover the Falklands. The 1964 'committee of 24' was used by Argentina to demand the return of the Falklands. One year later, after continued discussions, the United Nations passed resolution 2065 which invited Great Britain and Argentina to discuss "the Granting of Independence to Colonial Countries and Peoples with a view to finding a peaceful solution to the problem."8 This resolution and its wording set in motion 17 years of negotiations and a long road to war.

STRATEGIC SETTING

The Falkland Islands is an archipelago situated in the South Atlantic just over 300 miles from the east coast of Argentina. The archipelago consists of two main islands with hundreds of smaller islands as shown in Figure 1. Negotiations resulting from the UN mandate failed in December of 1981 after General Galtieri's coup succeeded. Argentina began concentrating on developing its operational plan to recover the Falklands. Argentina's combat power assigned to the invasion was powerful, consisting of a large modern surface and sub-surface fleet, over 200 combat aircraft, and 11000 personnel ground force contingent (See Appendix A). Their plan involved a minimal amphibious force that would land at key areas within the Falklands. These forces were meant to seize the seats of power and remove any British military threat. In addition, they were to cause no civilian casualties to any Falklander. Follow-on forces arrive shortly thereafter in order to occupy the archipelago. The British operational plan included four objectives: establishment of a no-exclusion zone around the Falklands, removal of Argentinean forces from South Georgia, gaining sea and air supremacy around the Falklands, and landing an amphibious force to retake Port Stanly. 11 Great Britain countered the Argentinean forces with two aircraft carriers and attached surface and sub-surface ships, 45 combat aircraft, and Marine and Para units that numbered over 8000 personnel (See Appendix A). As these forces converged upon one another in the South Atlantic, government officials on both sides miscalculated their opponent's resolve to win.

OPERATIONAL SETTING

The war started in the early morning hours of 2 April at Mullet Creek with the invasion of East Falkland by a small contingent of Argentinean Marines. They marched immediately for

the government house in Port Stanley and battled the defending 68 Royal Marines to a standstill. Only with the arrival of additional Argentinean troops, from the main invasion fleet now positioned in the harbor, did the Falkland Governor surrender the islands. On 3 April, Argentine forces battled Royal Marines in the invasion of the South Georgia Islands at Grytviken. The Royal Marines eventually surrendered in the face of overwhelming forces. The Argentineans were now in control of the Falkland and South Georgia Islands.

As news of the invasion spread around the world, Great Britain approached the United Nations with a resolution that condemned the invasion and demanded Argentina withdraw immediately. The United Nations passed the resolution as Security Council Resolution 502 and Great Britain immediately sent a task force south towards Ascension Island. ¹³ On 12 April, Great Britain announced the establishment of a 200 mile Military Exclusion Zone (MEZ) which established a military blockade around the islands. This zone would later be established as the Total Exclusion Zone (TEZ) in order to make targeting of Argentinean military vessels more suitable. 14 The task force split and conducted Operation Paraquet in the seizing of South Georgia on 21 April. The remainder of the task force continued towards the Falkland Islands. The air war began on 1 May with the British bombing targets in and around Port Stanley while Argentine aircraft attacked several British ships. The air war continued without either side gaining operational advantage for the next three weeks. In this time, several ships were lost on both sides, offensive air raids continued against both forces, and special unit operations were also conducted. The British landed its ground forces at Port San Carlos on the morning of 21 May. The British put ashore two brigades and immediately began moving to their ultimate objective of Port Stanley. They attacked Goose Green, Mount Kent, and Port Stanley in their land campaign,

with the latter being taken on 14 June. The war was concluded with the Argentinean forces surrendering that same day.

PARALLELS OF THE JOINT OPERATIONAL ACCESS CONCEPT

Projecting US military forces into contested operational areas will require extensive use of the five operational domains in order to maintain freedom of movement. Gaining and maintaining operational access in the face of armed opposition will require enormous efforts. These efforts require two tasks which must be achieved in order to obtain the overall mission objective. The first is combat forces must overcome the A2/AD capabilities of enemy forces along the approaches to, and in the objective area. The next task, which runs concurrent with defeating A2/AD capabilities, is leveraging the required national logistics assets to support those combat forces. These tasks will be affected by the prior existing conditions of both friendly and enemy activities. As with any combat operation, the forces involved must be significantly integrated in order to navigate the operational domains and successfully complete the mission.

ANTI-ACCESS AND AREA DENIAL

The recapture of the Falkland Islands is a modern example of joint forces gaining and maintaining operational access from the sea in order to gain a strategic objective. British forces were able to coordinate multiple operations over large distances to defeat a substantial enemy force by controlling the sea. This operation tested the abilities of the forces' command and control systems across the air, land, naval, and space domains. The prominent royal naval historian Sir Julian Stafford Corbett "introduced the concept of 'control of the seas' as a relative, rather than absolute, condition that applies naval power toward the broader goal of achieving national objectives." According to Corbett, "control of the seas is not an end in itself but a means to conduct operations in peace and war that produces effects on land." Corbett's

writings have influenced British maritime strategy, and the notion of 'control of the seas' would have played a large role in the planning for Operation Corporate. British maritime doctrine identifies controlling the seas as "the condition in which one has freedom of action to use the sea, airspace above, and water volume below for one's own purposes in specified areas and for specified periods of time and, where necessary, to deny or limit its use to the enemy." The battle group commander, Admiral Sandy Woodward, knew that he must first understand the three dimensions of the sea before a successful land campaign could move forward. He used air, surface, and sub-surface warfare in gaining an operational advantage over Argentina's anti-access/area denial weapon systems, thereby gaining control of the seas. The British planned a methodical approach to preparing the battlespace for the eventual amphibious assault of the Falkland Islands. This approach mirrors tenets of the US military's Air-Sea Battle as outlined in the JOAC.

Although anti-access and area denial are often discussed together and joined with the acronym A2/AD, they are two distinct methodologies. Anti-access consists of conditions set by the enemy to slow the progress of friendly troops entering the objective area, causing operations to take place over longer distances. Area denial is the methodology the enemy uses to slow the progress of friendly troops within the operational area. The twenty-first century has seen the proliferation of highly technical weapon systems falling into potential adversaries' hands, providing enormous capabilities for minimal cost. These systems allow both state and non-state actors to project power into those domains shared by all nations. In 1982, British forces faced similar opposition in and outside their area of operations during the Falklands War. The Argentinean military utilized Special Forces, aerial observation, submarines, surface vessels, strike aircraft and anti-ship missiles during the war in opposing British access efforts. Although

the Argentinean A2/AD threat was substantial and modern, it lacked integration across the Argentinean force. Great Britain, on the other hand, was able to work across the services to integrate their actions and gain access to the operational area.

The British battle group slowly expanded its numbers as it sailed south towards its prearranged rendezvous at Ascension Island. During this time, intelligence efforts required to glean any enemy activities in the area of operations (AO) were daunting. However, these efforts were crucial in planning the command and control of operations in order to gain air and sea superiority. Gaining these two objectives ultimately provided the force protection needed for the amphibious forces to land in San Carlos. Intelligence activities crossed the spectrum of services, intelligence organizations, and allied nations. The attempted sinking of British ships in Gibraltar by Argentinean Special Forces provides a prime example of the importance of the integration of intelligence activities. The Argentineans called the plan Operation Algeciras, and selected operatives to smuggle mines into Spain, spending nearly a month preparing for the mission.²¹ Admiral Jorge Anaya, who was part of the military junta in Argentina, had personally selected the target. The operatives planned on posing as fishermen and conducted a sub-surface swim in an attempt to attach mines to a British frigate. British Intelligence had been monitoring the forces and tipped off local police.²² It should be noted that if British intelligence forces had failed to stop the team, the consequences of sinking a British ship in Gibraltar could have had far reaching effects. It was the hope of Admiral Anaya that further assets would be needed to protect the port, thus forcing the British to pull away necessary combat power in the Falklands. The use of Special Forces to conduct strategic missions outside the AO could be an efficient antiaccess tactic.

Argentina's military employed anti-access operations to gain intelligence on the approaching British fleet. These operations, although insignificant in the outcome of the war, required the British to consider the threat during planning. The British task force worried incessantly about enemy submarines, and the first contact between British and Argentinean anti-access forces occurred 21 April. While the British were conducting Operation Parquet on South Georgia, an Argentinean Boeing 707 shadowed the task force as it moved toward the Falkland Islands.²³ The plane was escorted away by one of the Harriers providing security to the task force, but not before taking photographs to determine the plane's purpose.²⁴ The photos made it obvious that these flights were for surveillance purposes. Long-range surveillance systems, such as this 707, were a key capability of an enemy combatant in targeting friendly forces. He concluded the aircraft could pass valuable targeting information to the Argentinean's surface and sub-surface fleet. Admiral Sandy Woodward requested that his ships be allowed to shoot these aircraft down, but was denied in hopes a peaceful solution could be reached. The Argentinean submarine and aircraft threat had a profound effect on the task force well before the war started.

It was Norwegian top-secret listening station Fauske II, near Fauske in Nordland, which routinely intercepted information about the Argentine fleet movements from Russian satellites.²⁵ Additional information arrived from the United States and France. The British Embassy in Argentina continued to send weekly reports to the admiralty that they gathered from various sources throughout the country.²⁶ These collections of assets were crucial to the upcoming battle, as Admiral Woodward mentioned in his memoirs, "our intelligence had never been targeted on Argentina and since the Falklands had never been thought a likely battleground, our knowledge of the seas was absolutely minimal."²⁷ However, as the British battle group moved

south, numerous questions needed answers and it was vital that all involved share their knowledge.

The intelligence gathered was needed by the battle group in order to plan operations that could provide access to the littoral regions of the Falklands. Information sharing was vital to the amphibious task force and naval and army land forces in planning their operations. Argentina's area-denial capabilities, such as their submarines, aircraft, and anti-ship missiles, challenged Great Britain's ability to counter and their success hinged on the Sea Harriers, anti-air ships, and submarines. The Total Exclusion Zone gave the battle group large amounts of maneuver room to plan sub-surface and surface operations specifically aimed at providing force protection for the vast amphibious forces. The TEZ allowed the British to engage all Argentinean assets within the zone, thus establishing clear Rules of Engagement for the task force. Once air and sea superiority was achieved it would allow amphibious forces the maneuvering room needed for entry into the littorals, while avoiding Argentinean strengths.

The lack of certain military assets was hindering British planning. No airborne early warning systems existed for use by the fleet. The primary threat to British shipping was the sea, air, and land-launched Exocet missile, manufactured by France. Unfortunately, the British had only two ships equipped with the Sea Wolf missile which was capable of countering it. The Argentinean air threat was massive, with more than 200 combat air craft capable of being used in the operation. The British could only counter this threat with 32 Sea Harriers, as the primary anti-air defense in the fleet was Sea Dart, a missile that was not capable of engaging low flying aircraft. These hindrances to British planning would need to be overcome, and other methods deployed for controlling the sea. The battle group used aircraft carriers, destroyers, frigates, and submarines to control local sea lanes and approaches to the Falklands. The combination of ships

and Harriers were used with adequate results in allowing British ships to maneuver within the TEZ. The British neutralized several key area-denial assets early in the engagement. On the morning of 25 April, British ships attached to the South Georgia operations noticed a radar blip near the Argentinean base. They immediately launched three helicopters which found and engaged the submarine Santa Fe, causing it to ground on South Georgia. This action resulted in Argentina losing half of its operational submarine fleet.³⁰ On 2 May 1982, the British made what might have been their most significant success of the war. The Argentinean cruiser General Belgrano was sunk by the British nuclear submarine Conqueror. 31 The sinking of General Belgrano caused the Argentinean admiralty to withdraw all navy surface vessels, effectively giving the British control of the sea.³² The British were then able to use their submarine assets to monitor Argentine air bases on the mainland, passing critical intelligence to the fleet which still battled numerous air sorties. However, not all area denial efforts by the British were successful as they did not target runways in Argentina to destroy her aircraft. This decision, based on political factors, contributed to the Argentineans' ability to continue air raids on the British task force until the end of the war.

Great Britain was able to leverage its intelligence, naval assets, and command and control capabilities in order to provide force protection from Argentina's anti-access and area denial capabilities. Although shortcomings existed and were addressed in the initial planning, British planners were able to overcome these deficiencies by employing their own anti-access and area denial capabilities. Forward deployed submarines, allied surveillance systems, espionage, and Special Forces raids provided tenuous operational maneuverability in the waters around the Falklands. In particular, the battle group effectively used British maritime strategy of controlling the sea to allow a strategic objective to be met on land.

US joint forces commanders are required to project force into an operational area in the face of armed opposition in support of national interests.³³ It has been several decades since the last time US forces were required to conduct such an operation. As likely adversaries and political considerations change, US commanders should re-examine the Falklands War as four distinct lessons are available and can be applied to future operations.

Combat operations "may commence immediately upon deployment and could span multiple areas of responsibility" creating the need for a unified campaign or operational approach.³⁴ A clear chain of command within the area of operations is essential to ensuring a joint integrated force compliments rather than duplicates the actions of other subordinate units. Admiral Sandy Woodward, the Falklands Battle Group Commander made several arguments to have the British submarine force transferred to his operational control. However, the Flag Officer of Submarines, Northwood Headquarters assigned arbitrary patches of ocean for the submarines to patrol around the Falklands in order to monitor Argentine navy operations.³⁵ This method was intended to make identifying and engaging enemy ships easier. However, as intelligence information flowed in from Fauske listening station regarding the Argentinean fleet, it became apparent these submarines were not supporting the actions of the task force. Admiral Woodward understood that having operational control of these submarines could allow him to deal with a quickly changing set of circumstances, avoiding the delays of reaching back to HQ Submarine Forces, Northwood.³⁶ This example of the failure of command and control in ensuring cross-domain synergy can be avoided by ensuring one operational commander is responsible for the operation.

Enemy anti-access capabilities target forces approaching by air and sea, well outside the operational area. US planners should consider all threats from the time an operation is

announced. The defeat of Operation Algeciras is a testament to the British intelligence community's integration into the operational planning. The success of an enemy operation of this nature will test the resolve and will of the nation. Operational commanders will have to contend with facing losses well outside the objective area. A large success outside the operational area may have far reaching political effects on the operation for a relatively cheap cost to the enemy.

Enemy surveillance operations are the eyes and ears of enemy commanders and are a key anti-access consideration. These operations will exist across the five domains and allow the enemy to easily vector conventional air and sea assets into the area of operation. Long-range reconnaissance and surveillance systems, such as the Argentinean Boeing 707 that shadowed the British task force, are examples of systems capable of providing targeting information to enemy air and sea-based units. These systems have existed for years and will be familiar to the operational commander. However, an emerging trend is based in the cyber domain as enemies gain strategic advantage by locating the approaching fleets through cyberspace. Enemy cyber capabilities should be considered and all methods of disrupting these attacks should be taken. The old adage "loose lips sink ships" has never been more true.

Enemy area denial capabilities will reduce freedom of action for the joint force within the operational area. An operational commander must tailor his force to meet and defeat the main area denial capabilities: air and air-defense forces deny air superiority, anti-ship missiles and submarines deny maritime supremacy, cyber forces attack command and control nodes, and land forces oppose amphibious landings. Maintaining freedom of action within the operational area is paramount to meeting the strategic objective. The British were able to gain maritime supremacy around the Falklands and defeat the Argentineans surface and sub-surface area denial efforts.

However, they did not gain air supremacy over the Argentinean Air Force, which resulted in numerous amphibious and surface combatant ships being damaged or sunk (See Appendix B). These casualties were slowly affecting political resolve and morale in Great Britain. However, even with increasing casualties the British were able to conduct forcible entry operations in the face of armed opposition. While conducting amphibious assaults force protection efforts will be critical to ultimate success as enemy A2/AD strategies will operate on the principle of attrition.³⁷

BASING OPTIONS

Forces establishing supporting positions in contested areas will require extensive preparations to the operational area and enemy defense capabilities in advance to facilitate national strategic objectives. These preparations will require many objectives that will have to be taken directly from ships that have left their port of embarkation. However, as these ships obtain these supporting objectives, it is imperative according to the JOAC, that follow-on forces establish positions to form a solid network of "access infrastructure." The infrastructure established should be spread out over several lines of operations in order to mitigate the effects of anti-access and area denial weapons. While the British concentrated on supporting United Nations operations in Europe, they were unprepared for the enormous logistical efforts required; the defenses of the Falklands were not seen as a likely scenario and were 8000 miles away. The A2/AD threat was substantial and affected the logistics planning efforts. In addition, the British did not have any forward bases in the area of operations. British planners adhered to the strategic objective to provide for the arrival of sufficient personnel and equipment in the AO. Although this task was daunting, British logistics planners from civilian and military communities integrated seamlessly in support of the war effort.

The initial demands of the war caused issues with British naval operations. During the planning of Operation Corporate, the British had very little choice but to keep the majority of their ground forces and their sustainment on ship. This concept is called seabasing and is one of the basing options described in the JOAC. It is defined as the deployment, assembly, command, projection, reconstitution, and re-employment of joint power from the sea without reliance on land bases within the operational area.³⁹ The lines of communication for British forces in the Falklands were immense due to the geographic limitations. In addition, access infrastructure was non-existent for use by British forces. The closest supply depot the British had available for staging, preparation, and onward movement was Ascension Island, which is located approximately 3300 miles northeast of the Falkland Islands and became the only staging point for all follow-on support into the AO. Security issues exist with the seabasing concept, as A2/AD threats are designed to counter this exact scenario. A stunning example of how a single strike from the enemy can have operational and possibly strategic effects on the operation occurred on 25 May. The merchant ship Atlantic Conveyor was hit by an errant Exocet missile, after a radar countermeasure was fired from the frigate *Ambuscade* to avoid the missile.⁴⁰ The Atlantic Conveyor carried the majority of the British heavy-lift helicopter capability meant to assist in the breakout from Port San Carlos. In addition, British planners were forced to rework the land campaign plans as these helicopters were necessary for the resupply and ferrying of troops on the battlefield.

In order to meet the supported commander's requirement for personnel and equipment, numerous ad hoc steps were taken to meet the need. The British used the NATO contingency plan which required the War Maintenance Reserve (WMR), located in storage facilities throughout the country, to send equipment to ports for embarkation on ships.⁴¹ This strategic

decision caused the depletion of equipment and men needed for possible NATO Cold War operations against the Soviet Union within Europe. For example, the 3rd Commando Brigade was responsible for defending the northern flank in Norway against Soviet attack.⁴² The decision to utilize the WMR required NATO to accept risks within their war plans.

The British government required the use of over 50 merchant vessels which were pulled from the merchant fleet (See Appendix A). These ships were called STUFT (Ships Taken Up From Trade) and included a variety of merchant types: bulk, container, roll-on/roll-off, passenger, and tankers. Many of these vessels were converted in a rapid manner to allow a smooth transition to military operations. Using pre-staged equipment and readily available shipping gave British planners the ability to rapidly deploy personnel and equipment into the AO. Due to its strategic location between Great Britain and the Falklands, Ascension Island played a major role in the arrival and assembly of forces and support for the operation. Some British ground forces were also flown to Ascension for embarkation onto shipping. Large fuel reserves were established offshore from the numerous merchant ships attached to the fleet. The Royal Air Force (RAF) tankers flew numerous missions out of Ascension in order to support bombing, resupply, and surveillance flights. These capabilities gave the battle group and amphibious force commander the needed logistics support for all operations conducted within the Falkland Islands.

British logistics planners were able to use a variety of national assets to ensure the operation supported all services in accordance with the commander's plan. Planners used prestaged war materials to support rapidly deployable troops. These plans already existed as a NATO contingency during the Cold War and only required minor modification. These actions would not have been successful without the requisition of the British merchant fleet. The

merchant ships were able to augment naval power and allowed the rapid deployment of fully equipped troops. Finally, establishing a supply depot upon Ascension Island reduced the 7900 mile gap from Great Britain to 3000 miles. The island played an important role in providing supplies for the battle group and amphibious force. Although difficult, British planners were able to use strategic assets to plan support for all services participating in Operation Corporate.

Force projection by nature is logistically intensive, requiring a combination of basing options, pre-positioned equipment and supplies, and a protected distribution process.⁴⁴ The operation requires coordination and cooperation among all forces toward a commonly recognized objective. The operational commander should consider the distributed nature of operations, basing options, pre-positioning of equipment and supplies, and the distribution network when planning amphibious operations.

The distributed nature of operations described in the JOAC will strain any distribution systems, especially command and control. Although substantial and flexible, the United States has 116 active ships and 50 ships in reserve status that operate across five mission sets falling under the Military Sealift Command. Utilizing these ships in conjunction with allied nation support will leave a large logistics footprint spread out over a line of communications with potential to span several thousand miles in distance. Due to the size and complexity of logistics operations, it is imperative that civilian and military logistics communities are integrated seamlessly into the command structure.

Basing options that are forward deployed will help alleviate the issues associated with distance on the joint force. Operational commanders should develop a sustainment system that that provides a combination of basing options that support multiple independent lines of communication. This will provide two benefits to the joint force. Initially, operating over

multiple lines of communication will cause difficulty for enemy A2/AD forces to concentrate their efforts, thereby mitigating risk to the joint force. Secondly, it allows the joint force commander to exploit unforeseen opportunities and respond with additional forces to operational setbacks. The British were unable to support multiple lines of communication in their attack on the Falklands due to various political and geographic reasons. This deficiency left them vulnerable to catastrophic attacks on their logistics shipping.

Pre-positioning of equipment and supplies is necessary to facilitate the rapid deployment of troops forward into the operational area. For Great Britain, the nearest location they could safely land and offload their equipment was Ascension Island, which is was still 3300 miles from the objective area. This caused significant issues, as the men and equipment then had to marry-up with shipping for the remainder of the movement. It should be noted for US commanders that Maritime Pre-Positioned Shipping in the US inventory is administratively loaded and will require secure areas for offloading and movement into the objective areas.

The distribution network for a large amphibious force attempting to access opposed areas will be substantial. The enemy A2/AD threat may be such that a catastrophic attack on the network may change political opinions. The possibility exists that forward deployed bases will be on foreign soil and are hosted by an ally of the US during any future operation. These attacks may change political opinions of the allied hosts, and therefore jeopardize the mission. The operational commander should consider this when planning the defense of the logistics force.

CONCLUSION

The Falkland War occurred at a time when the world was mired in the Cold War. The British were concentrating on the European theatre and withdrew and downsized their force around the world to meet the Soviet threat. The Argentineans took advantage of this situation

and invaded the Falkland Islands in hopes that a political settlement could be reached before war broke out. Their assumptions were soon proven wrong after backroom negotiations through Washington failed. This failure caused political infighting within Argentina, which hindered their military from developing a cohesive strategy. Even with the failures in strategy, the British suffered numerous losses in shipping and men by the Argentine air force. If the Argentineans had synchronized their A2/AD assets across the services, then British losses may have been considerably more damaging and altered the outcome.

Operation Corporate is the ideal case study for US military planners working on future amphibious operations. The United States will face a variety of issues and challenges as it refocuses its outlook on the "Pivot to the Pacific," offering its Marine Corps an opportunity to renew its core competency of amphibious operations. The advancing military capabilities of China, North Korea, and Iran, the emergence of large terrorist and criminal organizations, and dwindling natural resources should cause the United States to carefully consider its future operations. The Joint Operational Access Concept is not an unprecedented concept, as learned from a study of the Falklands War. An examination of the lessons learned from the Falklands War supplies commanders with valuable insight for utilizing the JOAC in future amphibious operations.

Requirements for amphibious operations should include robust targeting of enemy A2/AD assets and establishing basing options within the global commons. The lessons learned from the Falklands War does not account for recent advances in military weapons and strategy to include the cyber domain. As the reliance on information networks to conduct military operations expands, the potential threat exists with state and non-state actors to conduct cyber espionage and cyber-attacks, with severe impacts on military operations. This new domain

provides significant anti-access capabilities to potential adversaries by allowing for access or disruption of critical command and control nodes of combat and logistics forces. The joint force commander will need to plan measures to combat these capabilities from the port of embarkation to the objective area. Utilizing the correct assets and capabilities from across the services and within the different domains will allow the joint force commander to operate within the five domains in order to meet the strategic objective.

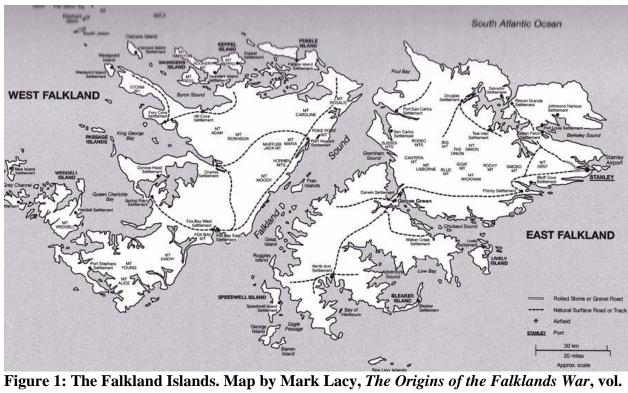


Figure 1: The Falkland Islands. Map by Mark Lacy, *The Origins of the Falklands War*, vol. 1 of *The Official History of the Falklands Campaign*, (New York: Taylor & Francis, 2005), xiii.

Appendix A - FORCES ENGAGED

British Forces

The following ships participated in British operations in the South Atlantic. The Royal Fleet Auxiliary (RFA) ships are government-owned and civilian-manned; the Ships Taken Up From Trade (STUFT) retained their merchant crews except for the trawlers modified for use as minesweepers which were assigned naval crews. However, naval communications personnel and other specialists were placed on board most merchant ships.

Royal Navy

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5 Fleet -submarines (nuclear propelled)
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3 VALIANT class

2 SWIFTSURE class

1 Patrol Submarine (diesel-electric)

OBERON class

2 V/STOL Aircraft Carriers1

HERMES

I INVINCIBLE class

2 Assault Ships)

FEARLESS class

8 Guid-3d Missile Destroyers

2 COUNTY class

I Type 82

5 Type 42

15 Frigates

2 ROTHESAY class

4 LEANDER class

7 Type 21

2 Type 22

2 Offshore Patrol Ships

CASTLE class

1 Ice Patrol Shit

ENDURANCE

3 Survey Ships (employed as medical evacuation ships)

HECLA class

Royal Maritime Auxiliary Service

1 Tug

1 Mooring and Salvage vessel

Royal Fleet Auxiliary (Continued)

10 Oilers

4 Replenishment Ships

1 Stores Support Ship

1 Helicopter Support Ship

6 Logistic Landing Ships

Ships Taken Up From Trade

- 2 Liners
- 1 Training Ship (converted to hospital ship)
- 4 Passenger--Cargo Ships
- 6 Cargo Ships
- 8 Roll-On/Roll-Off--Container Ships
- 1 Container Ship
- 15 Tankers
- 4 Offshore Support Vessels
- 3 Tugs
- 1 Cable Ship
- 5 Trawlers (for use as minesweepers)

The following were the naval air units that participated in the Falklands conflict. The ships that they operated from are indicated in parentheses. The aircraft in these squadrons totaled 28 Sea Harriers and more than 150 helicopters.

Fleet Air Arm Squadrons

- 4 squadrons with-Sea Harrier V/STOL aircraft (aircraft carriers)
- 1 squadron with Lynx MK 2 helicopters (aircraft carriers, destroyers, frigates)
- 5 squadrons with Sea King MK 2/4/5 helicopters (aircraft carriers, assault ships, auxiliary ships, merchant ships)
- I squadron with Wasp MK 1 helicopters (frigates, ice patrol ship, survey ships, merchant ships)
- 4 squadrons with Wessex Mk 3/5 helicopters (destroyers, auxiliary, ships, merchant ships)

The 3rd Commando Brigade Air Squadron of the Royal Marines operated Gazelle and Scout helicopters in the campaign

In addition, the Royal Air Force deployed 10 HARRIER GR.3 VSTOL aircraft and four Chinook helicopters to the Falklands (with three of the latter lost with the destruction of the merchant ship ATLANTIC CONVEYOR).

Several squadrons of RAF aircraft based in the United Kingdom and on Ascension Island also supported operations in the South Atlantic. These squadrons flew the following principal types of aircraft:

Chinook heavy-lift helicopters
Hercules cargo aircraft and tankers
Nimrod maritime patrol aircraft
Phantom FGR 2 fighter aircraft
Sea King search-and-rescue helicopters
VC 10 cargo aircraft
VICTOR K 2 tanker aircraft

VULCAN B strike aircraft

British Ground Forces

3rd Commando Brigade (Royal Marines) 5th Infantry Brigade (Army)

Argentine Forces

The following list contains all major Argentine naval ships available at the time of the Falklands conflict.

Argentine Navy

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4 Submarines
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2 Ex-US GUPPY type

2 Type 209

1 Aircraft Carrier

Ex-British COLCSSUS class

1 Light Cruiser

Ex-US BROOKLYN class

7 Destroyers

1 ex-US FLETCHER class

3 ex-US ALLEN M. SUMNER class

1 ex-US GEARING class

2 Type 42

3 Frigates

A-69 type

- 9 Corvettes
- 6 Patrol Boats
- 6 Minesweepers/Mine Hunters
- 1 Tank Landing Ship
- 3 Hydrographic Ships
- 1 Antarctic Support Ship
- 5 Transports
- 1 Fleet Replenishment Oiler
- 1 Tanker
- 4 Tugs

The Argentine naval air arm operated the following aircraft. All operated from land bases during the conflict.

5 Super Etendard fighter-bombers (carrier based)

10 A-4Q Skyhawk fighter-bombers (carrier based)

5 S-2A Tracker ASW aircraft (carrier based)

2 SP-2E Neptune maritime patrol aircraft

10 MB.339 trainer/ground attack direraft

Various helicopters and training aircraft were also flown by the Argentine Navy.

The Argentine Air Force operated approximately 50 Skyhawk fighter-bomber, 40 Mirage III/V fighters, 5 Canberra light bombers, 60 PUCARA ground support aircraft, plus helicopters, transports including two KC-130 Hercules tankers, and training aircraft. The Air Force also flew a modified Boeing 707 in the long-range reconnaissance role.

Argentine Ground Forces

11,000 Army 1,000 Marines

Department of the Navy. Lessons of the Falklands. Washington, DC: Office of Program Appraisal, February 1983, B-1, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA133333.

Appendix B - COMBAT LOSSES

British Losses

Ships Sunk (Cause):

Destroyer SHEFFIELD (Exocet/fire)

Destroyer COVENTRY (bombs)

Frigate ARDENT (bombs)

Frigate ANTELOPE (bombs)

Landing Ship SIR GALAHAD (bombs/fire))

Merchant Ship ATLANTIC CONVEYOR (Exocet/fire)

In addition, 2 British destroyers, 14 frigates, and 2 landing ships were damaged during the conflict, all to Argentine air attacks with bombs, rockets, and cannon except for the destroyer GLAMORGAN, which was damaged by a shore-launched Exocet missile.

Aircraft Lost to Enemy Action:

- 2 Sea Harrier V/STOL aircraft
- 3 Harrier GR.3 V/STOL aircraft
- 4 Gazelle helicopters
- 3 Scout helicopters

Aircraft Lost Aboard Ships Sunk or Damaged:

- 3 Chinook helicopters
- 3 Lynx helicopters
- 1 Wessex 3 helicopter
- 6 Wessex 5 helicopters

Aircraft Lost Operationally:

- 4 Sea Harrier V/STOL aircraft
- 1 Harrier GR.3 V/STOL aircraft
- 3 Sea King 4 helicopters
- 2 Sea King 5 helicopters
- 2 Wessex 5 helicopters

Argentine Losses

Ships Sunk (Cause):

Submarine SANTA FE (helicopters)

Cruiser GENERAL BELGRANO (submarines)

Trawler NARWHAL (aircraft)

Cargo ship RIO CARCARANA (helicopters/aircraft)

Transport BAHIA BUEN SUCESO (captured)

Store ship ISLAS DE LOS ESTADOS (gunfire)

1 Patrol craft (helicopters)

Ships Damaged (Cause):

1 corvette (antitank missile) 1 patrol tug (helicopters)

Aircraft Destroyed (British estimate):

Lost to Sidewinder missiles from Sea Harriers 16 + 1 probable

Lost to 30 mm cannon Sea Harriers 4 + 2 probable

Lost to Sea Wolf missiles 5

Lost to Sea Dart missiles 8

Lost to Sea Cat missiles 8 + 2 probable

Lost to ground missiles 24 + 8 probable

Lost to shipboard guns and small arms 7 + 1 probable

Destroyed on ground (to bombs, strafing, naval gunfire, and Special Forces) 31

Department of the Navy. Lessons of the Falklands. Washington, DC: Office of the Program Appraisal, February 1983, C-1, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA133333.

http://www.un.org/en/decolonization/declaration.shtml

http://www.usni.org/magazines/proceedings/2010-03/got-sea-control

http://www.nrk.no/programmer/tv/brennpunkt/1861285.html.

¹ U.S. Department of Defense. *Joint Operational Access Concept*. Washington, DC: Office of the Chairman of the Joint Chiefs of Staff, January 2012, 4.

² Ibid, 19.

³ Ibid.

⁴ "The United Nations and Decolonization" accessed 18 Dec 2012.

⁵ Ibid

⁶ http://www.un.org/en/decolonization/specialcommittee.shtml

⁷ Max Hastings and Simon Jenkins. *The Battle for the Falklands Max Hastings and Simon Jenkins*. 1 American ed. New York: Norton, 1983, 15.

⁸ Ibid, 16.

⁹ Ibid, 46.

¹⁰ Ibid, 73.

¹¹ Sandy Woodward and Patrick Robinson. *One Hundred Days: The Memoirs of the Falklands Battle Group Commander.* Annapolis, Md.: Naval Institute Press, 1992.

¹² Hastings and Jenkins, 74.

¹³ Ibid, 101.

¹⁴ Woodward and Robinson, 126.

¹⁵ U.S. Department of Defense. *Joint Operational Access Concept.* Washington, DC: Office of the Chairman of the Joint Chiefs of Staff, January 2012, 5.

¹⁶ Ibid. 7.

¹⁷ Victor G. Addison and David Dominy, "Got Sea Control," USNI.org, Mar, 2010,

¹⁸ Ibid, 2.

¹⁹ Ibid.

²⁰ Phillip Dupree and Jordan Thomas, "Air-Sea Battle: Clearing the Fog," armedforcesjournal.com, May, 2012, http://www.armedforcesjournal.com/2012/05/10318204

²¹ Giles Tremblet, "Falklands War Almost Spread to Gibraltar," Accessed 13 Jan 2013,

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²³ Woodward and Robinson, 101.

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²⁵ "Norwegian listening station important role in the Falklands War," accessed 8 Nov 2012,

²⁶ Luis Aandarcia. "Falklands' War: Strategic, Intelligence and Diplomatic Failures," (Master's Thesis, U.S Army War College), 1985, 16.

²⁷ Woodward and Robinson, 78.

²⁸ Hastings and Jenkins, 116.

²⁹ Ibid

³⁰ Steven Harper, "Submarine Operations during the Falkland War," (Master's Thesis, Naval War College, 1994). 8.

 $^{^{\}rm 31}$ Hastings and Jenkins, 148.

³² Ibid, 157.

³³ JOAC, 38.

³⁴ Ibid,28.

³⁵ Woodward and Robinson, 122.

³⁶ Ibid.

³⁷ JOAC, 31.

³⁸ Ibid, 19.

³⁹ Ibid.

⁴⁰Hastings and Jenkins, 227. ⁴¹ Paul Valovcin, "Logistics Lessons for the Operational Commander: The Falklands War," (Master's Thesis, Naval War College), 1992, 4.

Hastings and Jenkins, 86.

Valovcin, 4.

⁴⁴ JOAC, 32.
⁴⁵ "Military Sealift Command Ship Inventory," accessed 21 Feb 2013, http://www.msc.navy.mil/inventory.

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